

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

Applicant: Peter PERSOONE et al.  
Title: AN INFRA-RED REFLECTING LAYERED STRUCTURE  
Appl. No.: 10/533,890  
International Filing Date: 10/23/2003  
371(c) Date: 5/5/2005  
Examiner: Unassigned  
Art Unit: 1775  
Confirmation Number: 9698

**INFORMATION DISCLOSURE STATEMENT**  
**UNDER 37 CFR §1.56**

Mail Stop Amendment  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

Submitted herewith on Form PTO/SB/08 is a listing of documents known to Applicants in order to comply with Applicants' duty of disclosure pursuant to 37 CFR §1.56.

A copy of each non-U.S. patent document and each non-patent document is being submitted to comply with the provisions of 37 CFR §1.97 and §1.98.

The submission of any document herewith, which is not a statutory bar, is not intended as an admission that such document constitutes prior art against the claims of the present application or that such document is considered material to patentability as defined in 37 CFR §1.56(b). Applicants do not waive any rights to take any action which would be appropriate to antedate or otherwise remove as a competent reference any document which is determined to be a *prima facie* art reference against the claims of the present application.

**TIMING OF THE DISCLOSURE**

The listed documents are being submitted in compliance with 37 CFR §1.97(b), before the mailing date of the first Office Action on the merits.

**RELEVANCE OF EACH DOCUMENT**

All of the documents are in English.

Applicants respectfully request that each listed document be considered by the Examiner and be made of record in the present application and that an initialed copy of Form PTO/SB/08 be returned in accordance with MPEP §609.

Although Applicant believes that no fee is required for this Request, the Commissioner is hereby authorized to charge any additional fees which may be required for this Request to Deposit Account No. 19-0741.

Respectfully submitted,

Date August 1, 2007

FOLEY & LARDNER LLP  
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By 

Glenn Law  
Attorney for Applicant  
Registration No. 34,371

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Substitute for form 1449/PTO <b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b> Date Submitted: August 1, 2007 (use as many sheets as necessary)		<b>Complete if Known</b> Application Number 10/533,890 Filing Date 10/23/2003 First Named Inventor Peter PERSSOONE Art Unit 1775 Examiner Name Unassigned Attorney Docket Number 016782-0327	
Sheet	1	of	4



### U.S. PATENT DOCUMENTS

Examiner Initials*	Cite No. <sup>1</sup>	Document Number Number-Kind Code <sup>2</sup> (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
	A1	US-2,456,241-	12-14-1948	AXLER ET AL.	
	A2	US-3,649,359-	03-14-1972	APFEL ET AL.	
	A3	US-4,240,696-	12-23-1980	TRACY ET AL.	
	A4	US-4,799,745-	01-24-1989	MEYER ET AL.	
	A5	US-5,071,206-	12-10-1991	HOOD ET AL.	
	A6	US-5,591,529-	01-07-1997	BRAATZ ET AL.	
	A7	US-5,595,825-	01-21-1997	GUISELIN, OLIVIER	

### FOREIGN PATENT DOCUMENTS

Examiner Initials*	Cite No. <sup>1</sup>	Foreign Patent Document Country Code*Number*Kind Code <sup>3</sup> (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Documents	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T <sup>6</sup>
	A8	WO-99/36809-A1	07-22-1999	MINNESOTA MINING AND MANUFACTURING CO.		

### NON PATENT LITERATURE DOCUMENTS

Examiner Initials*	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.) date, page(s), volume-issue number(s), publisher, city and/or country where published.	T <sup>6</sup>
	A9	A.A. MARADUDIN et al., "Photonic band structure of a truncated, two-dimensional, periodic dielectric medium," Journal of Optical Society of America B, Vol. 10, No. 2, Feb. 1993, pgs. 307-313.	
	A10	B.E. A. SALEH et al., "Fundamentals of Photonics," Second Edition, pgs. 58-66, 243-279. (2007)	
	A11	C. WOODWARD et al., "Polymeric 1-D Photonic Crystals," printed from Internet 2007.	
	A12	C.M. BOWDEN et al., "Development and Applications of Materials Exhibiting Photonic Band Gaps," Introduction, Journal of Optical Society of America B, Vol. 10, No. 2, Feb. 1993,	
	A13	D.L. BULLOCK et al., "Photonic band structure investigation of two-dimensional Bragg reflector mirrors for semiconductor laser mode control," Journal of Optical Society of America B, Vol. 10, No. 2, Feb. 1993, pgs. 399-403.	
	A14	D.R. SMITH et al., "Photonic band structure and defects in one and two dimensions," Journal of Optical Society of America B, Vol. 10, No. 2, Feb. 1993, pgs. 314-321.	

Examiner Signature	/Ling Xu/	Date Considered	10/19/2009
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Substitute for form 1449/PTO <b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b> Date Submitted: August 1, 2007 (use as many sheets as necessary)			<b>Complete if Known</b>		
			Application Number	10/533.890	
			Filing Date	10/23/2003	
			First Named Inventor	Peter PERSSOONE	
			Art Unit	1775	
			Examiner Name	Unassigned	
			Attorney Docket Number	016782-0327	
Sheet	2	of	4		

## NON PATENT LITERATURE DOCUMENTS

Examiner Initials*	Cite No.†	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.) date, page(s), volume-issue number(s), publisher, city and/or country where published.	T°
	A15	E. YABLONOVITCH, "Engineered omnidirection external-reflectivity spectra from one-dimensional layered interference filters," Optics Letters, Vol. 23, No. 21, Nov. 1, 1998, pgs. 1648-1649.	
	A16	E. YABLONOVITCH, "Photonic band-gap structures," Journal of the Optical Society of America B, Vol. 10, No. 2, Feb. 1993, pgs. 283-295.	
	A17	E. YABLONOVITCH, "Photonic Crystals: Semiconductors of Light," Scientific American, December 2001, pgs. 47-55.	
	A18	E.E. BARR, "Visible and Ultraviolet Bandpass Filters," Optical Coatings-Applications and Utilization, Proceedings of the Society of Photo-Optical Instrumentation Engineers, Vol. 50, 1974, pgs. 87-118.	
	A19	H.A. MACLEOD, "A new approach to the design of metal-dielectric thin-film optical coatings," Optica Acta, Vol 25, No. 2, 1978, pgs. 93-106. (23 May 1977)	
	A20	H.A. MACLEOD, "Multiple Cavity Metal-Dielectric Filters," Thin-film Optical Filters, Second Edition, 1986, Bristol:Adam Hilger, pgs. 292-308.	
	A21	H.S. SÖZÜER et al., "Photonic bands: Convergence problems with the plane-wave method," Physical Review B, Vol. 45, No. 24, June 15, 1992-II, pgs. 13 962-13 972.	
	A22	J. KOUBA et al., "Conference 6182: Photonic Crystal Materials and Devices: Metallic photonic crystal for THz radiation," 6182-34, Session 6, An SPIE Europe Event, pg. 18. (6 April, 2006)	
	A23	J.H. APFEL, "Graphics in Optical Design," Applied Optics, Vol. 11, No. 6, June 1972, pgs.1303-1312.	

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		<b>Attorney Docket Number</b>	016782-0327

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	A24	Juh-Tzeng LUE et al., "Optical filters constructed from multilayers of dielectric and thin metallic films operating in the anomalous skin effect region," Journal of the Optical Society of America B, Vol. 6, No. 6, June 1989, pgs. 1103-1105.	
	A25	K.M. HO et al., "Existence of a Photonic Gap in Periodic Dielectric Structures," Physical Review Letters, Vol. 65, No. 25, Dec. 17, 1990, pgs. 3152-3155.	
	A26	M. SCALORA et al., "Metals under a new light," Optics and Photonics News, Sept. 1999, 10(9), pgs. 24-27.	
	A27	M. SCALORA, "Photonic Band Gap Metal Films for Light Filtering Applications," Pgs. 1-6.	
	A28	Macleod Medium, Vol. 7, No. 1, March 1999, pgs. 1-8.	
	A29	Macleod Medium, Vol. 7, No. 3, October 1999, pgs. 1-8.	
	A30	P. PERSOONE et al., "Spectrally selective optical filter for many applications," AIMCAL 2003 Fall Technical Conference and 17th International Vacuum Web Coating Conference, Oct. 26-29, 2003, pgs. 1-8.	
	A31	P. PERSOONE et al., "Spectrally selective optical filter for many applications," Powerpoint Presentation, AIMCAL 2003 Fall Technical Conference and 17th International Vacuum Web Coating Conference, Oct. 26-29, 2003, pgs. 1-17.	

Examiner  
Signature

/Ling Xu/

Date  
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	A32	P.H. BERNING et al., "Induced Transmission in Absorbing Films Applied to Band Pass Filter Design," Journal of the Optical Society of America B, Vol. 47, No. 3, March 1957, pgs. 230-239.	
	A33	R. GUETHER, "The Berlin scientist and educator Wilhelm Zenker (1829-1899) and the principle of color selection," Proceedings of the Society of Photo-Optical Instrumentation Engineers, 1999, 3738:pgs. 20-29.	
	A34	R.D. MEADE et al., "Accurate theoretical analysis of photonic band-gap materials," Brief Reports, Physical Review B, Vol. 48, No. 11, Sept. 15, 1993-I, pgs. 8434-8437.	
	A35	R.D. MEADE et al., "Nature of the photonic band gap: some insights from a field analysis," Journal of Optical Society of America B, Vol. 10, No. 2, Feb. 1993, pgs. 328-332.	
	A36	R.D. MEADE et al., "Photonic bound states in periodic dielectric materials," Rapid Communications, Physical Review B, Vol. 44, No. 24, Dec. 15, 1991-II, pgs. 13772-13774.	
	A37	S.G. JOHNSON, Photonic Crystals: Periodic Surprises in Electromagnetism, 29 pgs. (2003)	
	A38	Ze ZHANG et al., "Electromagnetic Wave Propagation in Periodic Structures: Bloch Wave Solution of Maxwell's Equations," Physical Review Letters, Vol. 65, No. 21, Nov. 19, 1990, pgs. 2650-2653	

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